

SurTec® 558 Black

Sealer for Black Surfaces

Properties

- liquid synthetic dispersion
- chromate free
- suited for trivalent black passivations on zinc, zinc/iron and zinc/nickel surfaces
- used for immersion and centrifuge process
- forms a clear organic film with temper resistant corrosion protection
- improves the corrosion protection by 50-150 h neutral salt spray, with respect to the passivation treatment
- can be removed with help of hot alkaline SurTec cleaners

Application

SurTec 558 is applied in rack or centrifuge application.

make-up values:	<i>rack</i>	<i>centrifuge</i>
SurTec 558 Black	20 %vol (15-30 %vol)	25 %vol (20-30 %vol)

make-up: Steps for make-up:

1. Fill SurTec 558 Black into the tank.
2. Fill up to the final volume with deionised water (check the pH-value before and adjust the water to pH 7-8).

temperature: room temperature (10-35 °C)

pH-value: 8-9
adjust with ammonia solution, ethanol amine or SurTec 520 A

application time: dip the parts into the process solution without staying time
or spray the solution until all parts are wetted completely

agitation: recommended: agitation by stirring device

tank material: plastic or steel with plastic coating;
for barrel application: separate centrifuges

filtration: coarse filtration may be necessary, especially if acid is dragged in
(precipitations!)

heating: not necessary and not recommended

hints: SurTec 558 Black and its solutions flocculate in acidic solutions. The pH-value of the make-up water, therefore, must be higher than pH 7. Furthermore, care must be taken that SurTec 558 Black and its solutions are not mixed with acidic solutions, for example in waste water tubes, to prevent undesired flocculation which cannot be dissolved any more. However, this effect can be used for waste water treatment of SurTec 558 Black (see "Product Safety and Ecology").

SurTec 558 Black cannot be applied directly in the barrel line, because the whole barrel would be sealed, the pores would be closed and it is very difficult to remove it. SurTec 558 Black has to be applied in separate centrifuges, where rotation speed and drying temperature can be adjusted variable. The centrifuge baskets have to be cleaned regularly (see "removal").

removal: The sealer can be removed in hot soak cleaning solution with caustic concentration of at least 80 g/l NaOH and temperatures > 75 °C (e.g. 10 % NaOH + 1-3 % SurTec 188). The floating flakes must be filtered off.

Technical Specification

(at 20 °C)	Appearance	Density (g/ml)	pH-value (conc.)
SurTec 558 Black	liquid, black	1.022 (1.01-1.04)	8.1 (7.5-9.5)

Maintenance and Analysis

Analyse and adjust the concentration of SurTec 558 Black and the pH-value regularly.

Sample Preparation

Take a sample at a homogeneously mixed position. Let it cool down to room temperature. If the sample is turbid, let the turbidity settle down and decant or filter (coarse).

SurTec 558 – Analysis by ISO 3251

equipment: clean bowl
analytical balance
drying cupboard

procedure: 1. Weigh out a clean empty bowl with an analytical balance.
2. Pipette 10 ml bath sample into it.
3. Dry the sample at 120 °C for 2 h in a drying cupboard.
4. Weigh the bowl again.

calculation: dry residue in g · 23.5 = %vol SurTec 558 Black

Ingredients

- synthetic polymers
- nonionic surfactants

Consumption and Stock Keeping

The consumption depends heavily on the drag-out. To determine the exact amounts of drag-out, see [SurTec Technical Letter 11](#). The following values per 10,000 Ah can be taken as estimated average consumption:

SurTec 558 Black 100 ml/m² at a make-up concentration of 20 %vol

In order to prevent delays in the production process, per 1,000 l bath, the following amounts should be kept in stock:

SurTec 558 Black 250 kg

Product Safety and Ecology

The safety instructions and the instructions for environmental protection have to be followed in order to avoid hazards for people and environment. The Material Safety Data Sheets (according to European legislation) contain explicit details for this.

The following hazard designations and classifications into water hazard classes (WHC) have to be taken into account:

<u>product</u>	<u>hazard designation</u>	<u>water hazard class</u>
SurTec 558 Black	-	WHC 1

The crack process of the dispersion can be done preferably using sulfuric acid and eventually an addition of a flocculation additive as SurTec 925.

Warranty

We are responsible for our products in the context of the valid legal regulations. The warranty exclusively accesses for the delivered state of a product. Warranties and claims for damages after the subsequent treatment of our products do not exist. For details please consider our [general terms and conditions](#).

Further Information and Contact

In our forum, you can discuss topics of the surface technology:
<http://forum.SurTec.com/>

If you have any questions concerning the process, please contact your local technical department: <http://SurTec.com/International.html>

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